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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,007	08/17/2006	Naoto Hirosaki	KPO-003	1410
32628 7590 11/18/2008 KANESAKA BERNER AND PARTNERS LLP 1700 DIAGONAL RD SUITE 310 ALEXANDRIA, VA 22314-2848				
EXAMINER MACCHIAROLO, PETER J				
ART UNIT 2879		PAPER NUMBER		
MAIL DATE 11/18/2008		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/588,007

**Applicant(s)**

HIROSAKI ET AL.

**Examiner**

PETER J. MACCHIAROLO

**Art Unit**

2879

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-7 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 8-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S5108)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 08/26/2008

## **DETAILED ACTION**

### ***Response to Amendment***

The reply filed on 08/18/2008 consists of changes to the claims, specification, and remarks related to the prior rejection of claims in the Previous Office Action. The above have been entered and considered. Applicant's request for reconsideration of the rejection in the last Office action is persuasive and, therefore, the rejection is withdrawn. However, in light of newly found prior art, pending claims 1-14 are not allowable as explained below.

### ***Double Patenting***

Applicant is reminded that the Double Patenting rejection in the office action filed 03/17/2008 is hereby held in abeyance.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 08/26/2008 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the lighting apparatus, comprising three or more light source units, each light source unit including at least one light emitting device, and each of said light source units or each of said light emitting device

has a mixing ratio of said first fluorescent material to said second fluorescent material which mixing ratio is different from those of the other light source units or other light emitting devices, in a manner that different light emission colors are visible, site by site of said lighting apparatus (see at least claim 4) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-3, 8, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ellens et al (USPGPUB 20030030368: “Ellens”).**

Regarding claims 1, 2, 10, 11 and 12, Ellens discloses at least in figure 1, a visible light emitting device, comprising at least: a semiconductor light emitting element (1) configured to emit bluish purple or blue light; a support member (8) formed with a depression (17) for placing said semiconductor light emitting element (1) therein, said depression constituted as a visible wavelength light reflective surface (see at least paragraph 25); terminals (2, 3) configured to supply electric power to said semiconductor light emitting element; and a phosphor (6) configured to absorb a part or the whole of light emitted from said light emitting element, and to emit fluorescence at a wavelength different from that of the absorbed light (see at least the abstract), the phosphor including X% of a first fluorescent material (YAG:Ce emits between 495 and 585 nm) configured to emit yellow light, and Y% of a second fluorescent material (sialon type, i.e. CaAlSiN<sub>3</sub>) configured to emit yellowish red light (~585 nm; see paragraph 27), at a mixing ratio meeting a condition of  $0 \leq X < 100$ ,  $0 < Y \leq 100$ , and  $0 < X + Y \leq 100$ , (see at least table 1) wherein said second fluorescent material comprises a CaAlSiN<sub>3</sub> crystal phase including, dissolved therein in a solid state Eu (see at least paragraph 28 and TABLE 1).

Regarding claim 3, Ellens discloses in at least paragraph 39, said semiconductor light emitting element (1) is a blue light emitting diode having a main emission wavelength of 380nm to 485nm.

Regarding claim 8 Ellens discloses in at least paragraph 25 wherein said semiconductor light emitting element is a light emitting semiconductor diode element made of InGaN.

Regarding claims 13 and 14, Ellens discloses at least in figure 1, said phosphors are dispersed in a transparent material (epoxy resin 5).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ellens.**

Regarding claim 9, Ellens is silent to the specific material of the substrate.

However, the Examiner hereby takes Official Notice that using sapphire in an LED substrate configuration is well-known in the art to allow for a durable substrate with good thermal properties.

Therefore, in view of the above discussion, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the device of Ellens with the substrate being sapphire to allow for a durable substrate with good thermal properties.

***Allowable Subject Matter***

Claims 4-7 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding independent claim 4, the prior art fails to teach or suggest each of said light source units or each of said light emitting device has a mixing ratio of said first fluorescent material to said second fluorescent material which mixing ratio is different from those of the other light source units or other light emitting devices, in a manner that different light emission colors are visible, site by site of said lighting apparatus, in combination with the remaining limitations of the claims.

The remaining claims are allowable due to their dependency.

***Response to Arguments***

Applicant's arguments filed 08/26/2008 have been fully considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (571) 272-2375. The examiner can normally be reached on 8:30 - 5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on (571) 272-2475. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

/Peter Macchiarolo/  
Patent Examiner, Art Unit 2879  
(571) 272-2375